

Amendment to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) A null mutant mouse whose endogenous genes that code for Na_v2 are inactivated by destruction, deficiency, or substitution and which shows salt intake behavior similar to that of a wild-type animals mouse under water-sufficient conditions and shows an increase of intake of hypertonic saline compared with a wild-type animals mouse under water ~~and salt~~-depleted conditions.

Claims 2-4 (Cancelled).

Claim 5 (Withdrawn) A gene that codes for a protein acting as a sensor of extracellular sodium ion level.

Claim 6 (Withdrawn) The gene according to claim 5, wherein the protein is comprised of amino acid sequence shown in Seq. ID No. 3, or is comprised of amino acid sequence where one or a few amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 7 (Withdrawn) The gene according to claim 5, which is comprised of DNA that contains a base sequence shown in Seq. ID No. 2 or its complimentary sequence, and a part or whole of those sequences.

Claim 8 (Withdrawn) The gene according to claim 5, which is comprised of DNA being hybridized under stringent conditions with DNA that contains a base sequence shown in Seq. ID No. 2 or its complimentary sequence, and a part of or whole of those sequences.

Claim 9 (Withdrawn) A protein acting as a sensor of extracellular sodium ion level.

Claim 10 (Withdrawn) The protein according to claim 9, which is comprised of amino acid sequence shown in Seq. ID No. 3.

Claim 11 (Withdrawn) The protein according to claim 9, which is comprised of amino acid sequence where one or a few amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 12 (Withdrawn) A fusion protein created by combining a protein acting as a sensor of extracellular sodium ion level and a marker protein and/or a peptide tag.

Claim 13 (Withdrawn) The fusion protein according to claim 12, wherein the protein acting as a sensor of extracellular sodium ion level is comprised of an amino acid sequence shown in Seq. ID No. 3.

Claim 14 (Withdrawn) An antibody which specifically combines with a protein acting as a sensor of extracellular sodium ion level.

Claim 15 (Withdrawn) The antibody according to claim 14, wherein the protein acting as a sensor of extracellular sodium ion level is comprised of an amino acid sequence shown in Seq. ID No. 3.

Claim 16 (Withdrawn) The antibody according to claim 14, wherein the antibody is a monoclonal antibody.

Claim 17 (Withdrawn) A host cell which contains an expression system that can express a protein acting as a sensor of extracellular sodium ion level.

Claim 18 (Withdrawn) The host cell according to claim 17, wherein the protein acting as a sensor of extracellular sodium ion level is comprised of an amino acid sequence shown in Seq. ID No. 3.

Claim 19 (Withdrawn) A transgenic non-human animal which excessively expresses a protein acting as a sensor of extracellular sodium ion level.

Claim 20 (Withdrawn) The transgenic non-human animal according to claim 19, wherein the protein acting as a sensor of extracellular sodium ion level is comprised of an amino acid sequence shown in Seq. ID No. 3.

Claim 21 (Withdrawn) The transgenic non-human animal according to claim 19, wherein the non-human animal is a mouse or a rat.

Claim 22 (Withdrawn) A method of screening a material that promotes or suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level characterized in using a cell that expresses a protein acting as a sensor of extracellular sodium ion level, and a subject material.

Claim 23 (Withdrawn) The method of screening a material that promotes or suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level according to claim 22, wherein the cell that expresses a protein acting as a sensor of extracellular sodium ion level is the host cell which contains an expression system that can express a protein acting as a sensor of extracellular sodium ion level.

Claim 24 (Currently Amended) A method of screening a material that promotes or suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level comprising the steps of:

- 1) administering said material to a null mutant mouse whose endogenous genes that code for Na_v2 are inactivated by destruction, deficiency, or substitution and which shows salt intake behavior similar to that of a wild-type animal~~mouse~~ under water-sufficient conditions and shows an increase of intakes of hypertonic saline compared with a wild-type animal~~mouse~~ under water-~~and salt~~-depleted conditions;
- 2) measuring the intake of hypertonic saline under water-sufficient and water- ~~and salt~~- depleted conditions; and
- 3) comparing said measurement with the intake of a wild-type mouse under said conditions.

Claim 25 (Withdrawn) A material that promotes or suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level characterized in being available through the screening method according to claim 22.

Claim 26 (Withdrawn) A medical compound used for curing patients who need promotion of the function or enhancement of the expression of a protein acting as a sensor of extracellular sodium ion level, and containing the protein according to claim 9 as its effective components.

Claim 27 (Withdrawn) A medical compound used for curing patients who need suppression of the function or the expression of a protein acting as a sensor of extracellular sodium ion level, and containing the protein according to claim 9 as its effective components.

Claim 28 (Withdrawn) The fusion protein according to claim 12, wherein the protein acting as a sensor of extracellular sodium ion level which is comprised of amino acid sequence where one or a few amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 29 (Withdrawn) The antibody according to claim 14, wherein the protein acting as a sensor of extracellular sodium ion level which is comprised of amino acid sequence where one or a few
amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 30 (Withdrawn) The host cell according to claim 17, wherein the protein acting as a sensor of extracellular sodium ion level which is comprised of amino acid sequence where one or a few amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 31 (Withdrawn) The transgenic non-human animal according to claim 19, wherein the protein acting as a sensor of extracellular sodium ion level which is comprised of amino acid sequence where one or a few amino acids are deficient, substituted, or added, in amino acid sequence shown in Seq. ID No. 3.

Claim 32 (Withdrawn) A method of screening a material that promotes or suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level characterized in using the non-human animal according to claim 19, and a subject material.

Claim 33 (Withdrawn) A medical compound used for curing patients who need promotion of the function or enhancement of the expression of a protein acting as a sensor of extracellular sodium ion level, and containing the material that promotes the function or the expression of a protein acting as a sensor of extracellular sodium ion level according to claim 25 as its effective components.

Claim 34 (Withdrawn) A medical compound used for curing patients who need suppression of the function or the expression of a protein acting as a sensor of extracellular sodium ion level, and containing the material that suppresses the function or the expression of a protein acting as a sensor of extracellular sodium ion level according to claim 25 as its effective components.